

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Withdrawn and Previously Presented): A manufacturing method of a soft magnetic green compact comprising:

mixing a magnetic powder including an iron system powder and a mixed powder including a resin powder;

compressively molding the magnetic powder and the mixed powder in a mold by a powder metallurgic method in a mold to form a green compact; and

applying thermal treatment to the green compact;

wherein the resin powder includes a lubrication function and a binding function; and

wherein a composition amount of the resin powder is 0.10-3.00 weight percent relative to the total weight before the molding and is 0.01-0.50 weight percent relative to the total weight after the molding and the thermal treatment.

Claim 2 (Withdrawn and Previously Presented): A manufacturing method of a soft magnetic green compact comprising:

mixing a magnetic powder formed by coating an insulation film on a surface of an iron system powder and a mixed powder including a resin powder;

compressively molding the magnetic powder and the mixed powder by a powder metallurgic method with a mold to form a green compact; and

applying thermal treatment to the green compact;

wherein the resin powder includes a lubrication function and a binding function; and
wherein

a composition amount of the resin powder is 0.10-3.00 weight percent relative to the total weight before the molding and is 0.01-0.50 weight percent relative to the total weight after the molding and the thermal treatment.

Claim 3 (Withdrawn): The manufacturing method of the soft magnetic green compact according to Claim 1, wherein the resin powder includes a polyamide system resin whose maximum particle diameter is equal to or smaller than 200 μ m.

Claim 4 (Withdrawn): A manufacturing method of a soft magnetic green compact comprising:

mixing a magnetic powder including an iron system powder and a mixed powder including a resin powder;

compressively molding the magnetic powder and the resin powder in a mold by a powder metallurgic method with a mold to form a green compact; and

applying thermal treatment on the green compact;

wherein the resin powder includes a lubrication function and a binding function; and

wherein the resin powder includes a polyamide system resin and a thermoplastic resin having a melting point equal to or higher than 200°C.

Claim 5 (Withdrawn and Previously Presented): The manufacturing method of the soft magnetic green compact according to Claim 4, wherein a composition amount of the polyamide system resin and the thermoplastic resin having the melting point equal to or higher than 200°C is 0.10-3.00 weight percent relative to a total weight before the molding and is 0.01-0.80 weight percent relative to a total weight after the molding and the thermal treatment.

Claim 6 (Withdrawn): The manufacturing method of the soft magnetic green compact according to Claim 4, wherein the thermoplastic resin having the melting point equal to or higher than 200°C includes polyphenylene sulfide system resin.

Claim 7 (Withdrawn): The manufacturing method of the soft magnetic green compact according to Claim 1, wherein the thermal treatment is performed at 100-450°C.

Claim 8 (Withdrawn): The manufacturing method of the soft magnetic green compact according to Claim 1, wherein the green compact after the thermal treatment includes density of 6.6-7.4 g/cm³.

Claim 9 (Withdrawn): The manufacturing method of the soft magnetic green compact according to Claim 1, wherein the thermal treatment is performed at oxidizing ambient.

Claim 10 (Currently Amended): A soft magnetic green compact comprising:
a magnetic powder including an iron system powder;
a mixed powder including a resin powder;
a green compact formed by compressively molding the magnetic powder and the mixed powder by a powder metallurgic method, the green compact applied with thermal treatment; and
the resin powder including a lubrication function and a binding function;
wherein a composition amount of the resin powder is ~~0.10-3.00~~ 0.01-0.50 weight percent relative to the total weight ~~before the molding and is 0.01-0.50 weight percent after the molding and the thermal treatment~~ after the molding and the thermal treatment, and

powder particles of the magnetic powders are bound to each other by oxidation performed by the thermal treatment.

Claim 11 (Currently Amended): A soft magnetic green compact comprising:
a magnetic powder including an iron system powder with an insulation coating;
a mixed powder including a resin powder;
a green compact formed by compressingly molding the magnetic powder and the resin powder in a mold by a powder metallurgic method, the green compact applied with thermal treatment; and

the resin powder including a lubrication function and a binding function;
wherein a composition amount of the resin powder is ~~0.10-3.00~~ 0.01-0.50 weight percent relative to the total weight ~~before the molding and is 0.01-0.50 weight percent after the molding and the thermal treatment~~ after the molding and the thermal treatment, and
powder particles of the magnetic powders are bound to each other by oxidation performed by the thermal treatment.

Claim 12 (Original): The soft magnetic green compact according to Claim 10, wherein the resin powder includes a polyamide system resin whose maximum particle diameter is equal to or smaller than 200 μ m.

Claim 13 (Previously Presented): The soft magnetic green compact according to Claim 10, wherein the resin powder includes a polyamide system resin and a thermoplastic resin having a melting point equal to or higher than 200°C.

Claim 14 (Original): The soft magnetic green compact according to Claim 13, wherein the thermoplastic resin having the melting point equal to or higher than 200°C includes a polyphenylene sulfide system resin.

Claim 15 (Currently Amended): The soft magnetic green compact according to Claim 10, wherein the thermal treatment is performed at 100-450°C and at oxidizing ambient.

Claim 16 (Original): The manufacturing method of the soft magnetic green compact according to Claim 10, wherein the green compact after the thermal treatment includes density of 6.6-7.4 g/cm³.

Claim 17 (Canceled).

Claim 18 (Previously Presented): A soft magnetic green compact comprising:
a magnetic powder including an iron system powder;
a resin powder;
a green compact formed by compressively molding the magnetic powder and the resin powder by a powder metallurgic method, the green compact applied with thermal treatment;
and
the resin powder including a lubrication function and a binding function;
wherein a composition amount of the resin powder is 0.01-0.50 weight percent relative to the total weight after the molding and the thermal treatment; and
powder particles of the magnetic powder are bound to each other by oxidization.

Claim 19 (Previously Presented): A soft magnetic green compact comprising:

a magnetic powder including an iron system powder provided with an insulation film coating on a surface thereof;

a resin powder;

a green compact formed by compressively molding the magnetic powder and the resin powder by a powder metallurgic method, the green compact applied with thermal treatment; and

the resin powder including a lubrication function and a binding function;

wherein a composition amount of the resin powder is 0.01-0.50 weight percent relative to the total weight after the molding and the thermal treatment; and

powder particles of the magnetic powder are bound to each other by oxidization.

Claim 20 (Previously Presented): The soft magnetic green compact according to Claim 10, wherein the thermal treatment is performed at 250-450°C and at oxidizing ambient.

Claim 21 (Previously Presented): The soft magnetic green compact according to Claim 11, wherein the thermal treatment is performed at 250-450°C and at oxidizing ambient.

Claim 22 (Previously Presented): The soft magnetic green compact according to Claim 11, wherein the insulation film includes phosphoric acid system film formed by phosphoric conversion treatment.

Claim 23 (Previously Presented): The soft magnetic green compact according to Claim 22, wherein the insulation film of the magnetic powder is bound by oxidization.

Claim 24 (New): The soft magnetic green compact according to Claim 10, wherein a composition amount of the resin powder is 0.10-3.00 weight percent relative to the total weight before the molding.

Claim 25 (New): The soft magnetic green compact according to Claim 11, wherein a composition amount of the resin powder is 0.10-3.00 weight percent relative to the total weight before the molding.

SUPPORT FOR THE AMENDMENT

Claims 10 and 11 are currently amended.

Claim 17 was previously canceled.

Claims 24 and 25 are added.

The amendments to Claims 10 and 11 are supported throughout the present specification, at page 10, paragraph [0041], page 12, paragraph [0045], and page 15, paragraph [0056], as originally filed.

Claims 24 and 25 are supported by the specification at pages 9-10, paragraph [0039], and page 11, paragraph [0042], as originally filed.

No new matter is believed to be added by the amendments.

Upon entry of these amendments, Claims 1-16 and 18-25 will be pending in this application. It is noted that Claims 1-9 were previously withdrawn from consideration by the Examiner, in view of a Restriction Requirement.